



Lxr 8000

# specifications

# Redefining high-availability for the enterprise Intel-based server

The HP NetServer LXr 8000 features the very latest technologies to maximize system performance, system uptime, and user productivity; while making administration and support easier than ever:

- One to four Intel<sup>®</sup> Pentium<sup>®</sup> II Xeon<sup>™</sup> or Pentium III Xeon processors providing the highest performance of any Intel architecture system.
   Upgrades to 8-way multiprocessing and future processors
- Compact 7U rack height to maximize the density of your computer resources
- Integrated dual-channel Ultra2 SCSI controller that connects up to 15 devices per channel
- Up to 8GB ECC memory with memory scrubbing
- Hot-plug 64-bit PCI subsystem and redundant, hot-swappable power supplies and fans
- Compact platform allowing fast installation and easy access for under oneminute replacement of components
- Preinstalled HP TopTools Remote Control card that enables secure server access, regardless of system state, over a modem or LAN connection
- HP TopTools for Servers with web interface for device management and HP OpenView™ ManageX/SE for NOS and Application management
- Highly dense 3U HP NetServer Rack Storage/12 and Rack Storage/12FC
   Ultra2 SCSI and Fibre Channel external mass storage enclosures



The HP NetServer LXr 8000 combines high-availability and high-performance features with innovative delivery and support programs to raise the bar on data center optimization for enterprise Intel-based servers.





Performance		
Processor	Intel Pentium III Xeon 500MHz or 550MHz	
Level 2 Cache	512KB, 1MB, and 2MB <sup>1</sup>	
ECC Memory	256MB 50ns EDO DIMMs standard, expandable to 8GB	
I/O Expansion Slots	Ten total, full-length PCI: four 64-bit hot-plug slots, five 32-bit slots, and one shared 32-bit PCI/ISA slot	
Video	<ul> <li>Integrated 1024×768, 256-color resolution at 60–75Hz</li> <li>1MB standard video memory</li> </ul>	
SCSI Controller	Integrated dual-channel Ultra2 SCSI controller	
External Mass Storage System	HP NetServer Rack Storage/12 and HP NetServer Rack Storage/12FC	
Maximum Internal Storage	Two hot-swap, Ultra2 SCSI low-profile drives	
CD-ROM	IDE 24x Max	
Flexible Disk Drive	1.44MB 3.5"	
Built-In I/O Ports	Keyboard, video, mouse, 2 serial ports, 1 parallel port, 2 USB (Universal Serial Bus) ports	
Availability		
Self-Restart Capability	Automatic Server Restart (ASR) that reboots the server in the event of a NOS hang	
Self-Correcting Memory	Manageable Error Checking and Correcting (ECC) system memory and cache memory	
Hot-Swap Disk Drives	Two hot-swap, Ultra2 SCSI low-profile drives	
Disk Array Controllers	HP NetRAID-1Si, HP NetRAID-3Si (Ultra2 SCSI) or FC Array (Fibre Channel)	
Redundant Hot-Swap Cooling Systems	6 hot-swappable redundant fans, individually removable	
IPMI (Intelligent Platform Management Interface)	<ul> <li>An open specification to simplify and standardize system communication for device management</li> </ul>	
	Foundation for self-healing	
Network Interface	HP 10/100TX PCI LAN adapter; support for redundant NICs	
Tape Backup	Optional scalable and highly available tape backup: HP SureStore TapeRack enclosure, which incorporates up to four removable DAT24, DLT40r, or DLT70r drives, delivering 24GB to 280GB capacity. Dual, redundant, load-sharing power supplies and fans ensure uninterrupted backup operation	
	For even greater backup flexibility, the HP SureStore Fibre Channel SCSI bridge enables maximum availability of critical backup data. It supports long-distance backup or mirroring of data—up to 500 meters for a single connection. Remote backup of an offsite location provides disaster protection	
	<sup>1</sup> 2MB available with 450MHz, 500MHz, or 550MHz only	

<sup>2</sup> 





Manageability	
Installation and Configuration	HP NetServer Navigator with automated menu-driven setup, and guided Microsoft <sup>®</sup> Windows NT <sup>®</sup> and Novell <sup>®</sup> NetWare <sup>®</sup> and IntranetWare <sup>™</sup> installation
Remote Administration	<ul> <li>Preinstalled HP TopTools Remote Control PCI card for secure remote access</li> <li>File transfer capabilities for secure and easy remote updates</li> </ul>
Management Software	<ul> <li>HP TopTools for Servers, a comprehensive server management solution with intuitive browser-based user interface; facilitates troubleshooting, administration, and asset information collection</li> </ul>
	HP OpenView ManageX/SE for complete NOS and Application management
	Easy interaction with other leading network and system management products
Expandability	
Design Features	1 to 4 Intel Pentium II Xeon or Pentium III Xeon processors
	<ul> <li>In-box upgrade to 8-way system with Intel Pentium II or Pentium III Xeon processors</li> </ul>
	Support for future Intel processors
	Up to 8GB memory
Flexibility	
Supported Operating Systems	Microsoft Windows NT 4.0, NT 4.0E
	Novell NetWare 4.11
	Novell NetWare 5.0
	SCO® UnixWare® 7.1
Security and Safety	
System Security	HP TopTools Remote Control card: 1.1 encrypted password
	Startup password
	<ul> <li>Keyboard lock button with optional screen blank</li> </ul>
	<ul> <li>Enable or disable serial port, flexible disk drives, and write operations to flexible disk drives</li> </ul>
	Rack door equipped with lock





Service and Support		Product No.
Warranty	<ul> <li>3-year, next-business day, onsite limited warranty from HP or authorized resellers (standard business hours) worldwide</li> </ul>	
	<ul> <li>Prefailure notification on key system components</li> </ul>	
HP SupportPack Options	Reactive Bundle NT Solution, 1 year (includes Priority Recovery & 6-Hour Hardware Call-to-Repair Commitment)	H1932BA
	<ul> <li>Priority Recovery Add-on for BackOffice, 1 year</li> </ul>	H1936BA
	<ul> <li>1-year, onsite within 4-hour response (standard business hours)</li> </ul>	H2845E
	<ul> <li>1-year, onsite within 4-hour response (24 hours/day, 7 days/weeks)</li> </ul>	H2846E
	<ul> <li>3-year, onsite within 4-hour response (standard business hours)</li> </ul>	H5516A
	<ul> <li>3-year, onsite within 4-hour response (24 hours/day, 7 days/weeks)</li> </ul>	H5515A
	<ul> <li>3-year, Hardware Call-to-Repair Commitment within 6 hours (24 hours/day, 7 days/weeks)</li> </ul>	H1822A
	<ul> <li>Onsite installation and network configuration</li> </ul>	H5751A
	<ul> <li>HP rebate program for any hardware support contract with utilization of the HP TopTools Remote Control card.<sup>1</sup></li> </ul>	_
HP Personalized System Support	OS/NOS/LAN/WAN support, desktop and server applications	H1847AA
	Phone-in support	MSTOSNUZ+T00
	Proactive Services	H14500AA+T00
	<ul> <li>Standard Recovery, NOS phone-in<sup>1</sup></li> </ul>	H2217AA
	<ul> <li>Standard Recovery, Application phone-in<sup>1</sup></li> </ul>	H2216AA
	<ul> <li>Standard Recovery, Proactive Management <sup>1</sup></li> </ul>	H2219AA
	Standard Recovery, Proactive Support	H2218AA
	<sup>1</sup> Available in North America only	

<sup>&</sup>lt;sup>1</sup> Available in North America only





Service and Support		Product No.	
HP Scalable Services and Support	Direct product structure:		
	<ul> <li>HP Scalable Services and Support for Windows NT, various options</li> </ul>	H1930AA+000	
	Indirect product structure:		
	<ul> <li>Critical Systems Support for Windows NT<sup>1</sup></li> </ul>	H1931BA	
	<ul> <li>Priority Recovery for Windows NT<sup>1</sup>, 1 year</li> </ul>	H1934BA	
	<ul> <li>Proactive Prevention for Windows NT<sup>1</sup>, 1 year</li> </ul>	H1941BA	
	<ul> <li>Managed Change for Windows NT<sup>1</sup>, 1 year</li> </ul>	H1943BA	
	<ul> <li>Performance Optimization for Windows NT<sup>1</sup>, 1 server</li> </ul>	H1946BA	
	<ul> <li>Expert Technical Advice for Windows NT<sup>1</sup>, 1 topic</li> </ul>	H1947BA	
	<ul> <li>Account Service Engineer days for Windows NT<sup>1</sup>, 1 day</li> </ul>	H1948BA	
	<ul> <li>Operations Checkup for Windows NT<sup>1</sup>, 1 engagement</li> </ul>	H1950BA	
Reseller Support Services	Comprehensive reseller support framework ensures successfu HP NetServers; includes:	I support of	
	<ul> <li>Proactive Notification e-mail service<sup>2</sup></li> </ul>		
	<ul> <li>Service and support website<sup>2</sup></li> </ul>		
	<ul> <li>Server Management and Hardware Troubleshooting courses (STAR)<sup>2</sup></li> </ul>		
	Troubleshooting toolkit <sup>2</sup>		
	24x7 Telephone support for authorized resellers		
	Business Builders Reseller Support		
	Information Assistant Navigator CD Reference Library (option)	nal)	
	<sup>1</sup> Available in North America and selected Asia/Pacific countries		
	<sup>2</sup> http://www.hp.com/netserver/servesup/		





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99.9% Uptime Commitment	See your HP Representative for details on specific supported configurations	
HP NetServer Racks Express	<ul> <li>Easy and quick server deployment: Complete HP NetServer solutions are delivered to your reseller, or your site, within four weeks of receipt of order, with components such as HP NetServers, racks, PDUs, cables, RAID storage, and switchboxes installed and configured</li> </ul>	
	<ul> <li>Dramatic time savings: Because a system from HP NetServer Racks Express is delivered configured to your site, power-on is reduced from days to hours</li> </ul>	
	<ul> <li>Easy customization: Your reseller and HP Sales Representative will work together with you to design HP NetServer solutions that meet your unique needs</li> </ul>	
	<ul> <li>Convenience: HP NetServer Racks Express services deliver preassembled rack systems in four weeks or less at a single economical price per rack</li> </ul>	
Regulatory Compliance		
Electromagnetic Immunity	Generic Immunity (EN 50082-1, EU Countries), including:	
	ESD (IEC-801-2): 4KV Contact, 8KV Air	
	<ul> <li>Radiated Immunity (IEC-801-3): 3V/m, 80% AM Mod, 27–1000MHz</li> </ul>	
	<ul> <li>EFT (IEC-801-4): 1.0KV Power, 0.5KV I/O lines</li> </ul>	
	IEC 1000-3-2: Harmonic Current	
	IEC 1000-3-3: Voltage Fluctuation and Flicker	
Electromagnetic Interference	USA/Canada: FCC Class A	
	EU Countries: EN 55022 Class A	
	Korea: M of C Class A	
	Japan: VCCI Class A	
	Australia: CISPR 22 Class A	
	New Zealand: CISPR 22 Class A	
	Taiwan: BC1Q Class A	
Safety	EN 60950/IEC 950 Compliance (International)	
	<ul> <li>UL, cUL Listed (USA, Canada file E139742)</li> </ul>	
	TÜV Certified (Germany)	
	CE Marking (Europe)	





	Product Accessory <sup>1</sup>	Product No.
Memory	• 256MB DIMM kit	D6112A
	• 1GB DIMM kit	D6114A
Processor	Intel Pentium II Xeon 400MHz 512KB L2 cache	D7007A
	<ul> <li>Intel Pentium II Xeon 400MHz 1MB L2 cache</li> </ul>	D6119A
	<ul> <li>Intel Pentium II Xeon 450MHz 512KB L2 cache</li> </ul>	D7001A
	<ul> <li>Intel Pentium II Xeon 450MHz 1MB L2 cache</li> </ul>	D6121A
	<ul> <li>Intel Pentium II Xeon 450MHz 2MB L2 cache</li> </ul>	D6122A
	<ul> <li>Intel Pentium III Xeon 500MHz 512KB L2 cache</li> </ul>	C7109A
	<ul> <li>Intel Pentium III Xeon 500MHz 1MB L2 cache</li> </ul>	C7110A
	<ul> <li>Intel Pentium III Xeon 500MHz 2MB L2 cache</li> </ul>	C7091A
	<ul> <li>Intel Pentium III Xeon 550MHz 512KB L2 cache</li> </ul>	D8529A
	<ul> <li>Intel Pentium III Xeon 550MHz 1MB L2 cache</li> </ul>	D8530A
	<ul> <li>Intel Pentium III Xeon 550MHz 2MB L2 cache</li> </ul>	D8531A
Internal Storage Devices	• 4.2GB low-profile, hot-swap Ultra2 SCSI disk drive (7,200rpm)	D6104A
	<ul> <li>9.1GB low-profile, hot-swap Ultra2 SCSI disk drive (7,200rpm)</li> </ul>	D6106A
	<ul> <li>9.1GB low-profile, hot-swap Ultra2 SCSI disk drive (10,000rpm)</li> </ul>	D6107A
	• 18.2GB low-profile, hot-swap Ultra2 SCSI disk drive (7,200rpm)	D7174A
Disk Array Controller	HP NetRAID-1Si 1-channel Ultra2 SCSI, I2O capable	D2140A
	HP NetRAID-3Si 3-channel Ultra2 SCSI, I2O capable	D5955A
Host Bus Adapter	HP PCI ultra/wide adapter	D5025A
External Storage Enclosures	HP NetServer Rack Storage/12	D5989A
(SCSI)	HP NetServer Rack Storage/12 SCSI Card	D6025A
	HP NetServer Rack Storage/12 Cables:	
	<ul> <li>1-meter SCSI cable, high density to very high density offset</li> </ul>	D7131A
	<ul> <li>2.5-meter SCSI cable, high density to high density</li> </ul>	D3636A
	<ul> <li>2.5-meter SCSI cable, high density to very high density offset</li> </ul>	D6020A
	<ul> <li>5-meter SCSI cable, high density to very high density offset</li> </ul>	D6982A
	<ul> <li>10-meter SCSI cable, high density to very high density offset</li> </ul>	D6983A
	HP NetServer Y Power Cable kit <sup>2</sup>	D4991A

<sup>&</sup>lt;sup>1</sup> Please see the *HP NetServers Configuration Guide*, P/N 5968-1542EUC, for important technical information when choosing your accessories, or see HP NetServer configuration tools located at http://www.hp.com/go/netserver .

One kit is required for each of the 10th to 15th HP NetServer Rack Storage/12 or HP NetServer Rack Storage/12FC units to be installed in a single rack.





	Product Accessory <sup>1</sup>	Product No.
External Storage Enclosures (Fibre Channel)	HP NetServer Rack Storage/12FC	D5991A
	HP FC Array disk array controller (includes three 3-meter cables and three copper GBICs)	D5990A
	HP FC Hub (includes one 3-meter Fibre Channel cable and two copper GBICs)	D6976A
	HP FC HBA (host bus adapter) card	D6977A
	Storage Devices:	
	• 4.2GB, 7,200rpm hot-swap Ultra2 SCSI disk drives, low profile	D6104A
	• 9.1GB, 7,200rpm hot-swap Ultra2 SCSI disk drives, low profile	D6106A
	• 9.1GB, 10,000rpm hot-swap Ultra2 SCSI disk drives, low profile	D6107A
	• 18.2GB, 7,200rpm hot-swap Ultra2 SCSI disk drives, half-height	D6108A
	• 18.2GB, 7,200rpm hot-swap Ultra2 SCSI disk drives, low-profile	D7174A
	• 18.2GB, 10,000rpm hot-swap Ultra2 SCSI disk drives, half-height	D7031A
	HP NetServer Rack Storage/12FC Cables:	
	<ul> <li>1-meter SCSI cable, high density to very high density offset<sup>2</sup></li> </ul>	D7131A
	<ul> <li>3-meter Fibre Channel HSS DC to HSS DC copper cable with 2 copper GBICs<sup>3</sup></li> </ul>	D6978A
	<ul> <li>5-meter Fibre Channel HSS DC to HSS DC copper cable with 2 copper GBICs</li> </ul>	D6979A
	<ul> <li>10-meter Fibre Channel HSS DC to HSS DC copper cable with 2 copper GBICs</li> </ul>	D7080A
	<ul> <li>50-meter Fibre Channel multimode short-wave optical with 2 optical-fibre GBICs</li> </ul>	D6980A
	<ul> <li>100-meter Fibre Channel multimode short-wave optical with 2 optical-fibre GBICs</li> </ul>	D6981A
	<sup>1</sup> Please see the <i>HP NetServers Configuration Guide</i> , P/N 5968-1542EUC, for important technical information when choosing your accessories, or see HP NetServer configuration tools located at http://www.hp.com/go/netserver.	

 $<sup>^{2}\,\</sup>mbox{Required}$  for dual SCSI channel RS/8 configuration when connecting to RS/12FC.

 $<sup>^3</sup>$  Gigabit interface converter (GBIC) is attached to each end of the cable and is installed into the FC Hub and the FC HBA.





	Product Accessory	Product No
Automated Backup	HP SureStore Fibre Channel SCSI Bridge 2100ER	C6340F
	<ul> <li>HP SureStore DLT 4000 drive Autoloader 8-slot 418 (rackmount kit)</li> </ul>	C6287J
	<ul> <li>HP SureStore DLT 7000 drive Autoloader 8-slot 718 (rackmount kit)</li> </ul>	C6287J
	<ul> <li>HP SureStore DLT 4000 drive Library 15-slot 4115/4215 (rackmount kit)</li> </ul>	C5173F
	<ul> <li>HP SureStore DLT 7000 drive Library 15-slot 7115/7215 (rackmount kit)</li> </ul>	C5173J
	HP SureStore Rack Tape	C5695A
External Storage Devices	<ul> <li>4.1GB hot-swap Ultra/Wide SCSI disk drive (7,200rpm)</li> </ul>	D3583C
for use in HP NetServer Rack	<ul> <li>9.1GB hot-swap Ultra/Wide SCSI disk drive (7,200rpm)</li> </ul>	D4289A
Storage/8 Enclosures)	<ul> <li>9.1GB hot-swap Ultra/Wide SCSI disk drive (10,000rpm)</li> </ul>	D6019A
	<ul> <li>18.2GB hot-swap Ultra/Wide SCSI disk drive (7,200rpm)</li> </ul>	D5039A
Network Interface Card	HP 10/100TX PCI LAN adapter	D5013A
Uninterruptible Power Supply	UPS devices are available from American Power Conversion (APC). For additional information, contact your local APC reseller, or see APC's web page at http://www.apcc.com	
Monitors	HP 15" Low Emissions Display	D2825A
	HP 19" Display	D2843A
	HP 21" Display	D2846A
HP Racks <sup>2, 3</sup>	HP Rack System/E41 (41 EIA units of usable space)	J1500A
	• Front door for /E41	J1509A
	Tie kit for /E41	J1512A
	Side panel kit for /E41	J1506A
	HP Rack System/E33 (33 EIA units of usable space)	J1501A
	• Front door for /E33 or /U33	J1510A
	Tie kit for /E33 or /U33	J1513A
	Side panel kit for /E33	J1507A
	HP Rack System/E25 (25 EIA units of usable space)	J1502A
	• Front door for /E25 or /U25	J1511A
	Side panel kit for /E25	J1508A
	HP Rack System/U33 (33 EIA units of usable space)	J1466A
	• Front door for /E33 or /U33	J1510A
	Tie kit for /E33 or /U33	J1513A
	HP Rack System/U25 (25 EIA units of usable space)	J1464A
	Front door for /E25 or /U25	J1511A
	<sup>1</sup> Please see the <i>HP NetServers Configuration Guide</i> , P/N 5968-1542EUC, for important technical information when choosing your accessories, or see HP NetServer configuration tools located at http://www.hp.com/go/netserver.	

<sup>&</sup>lt;sup>2</sup> EIA unit = 1.75 inches

<sup>&</sup>lt;sup>3</sup> For details, see http://www.hp.com/netserver/products/racks/





	Product Accessory <sup>1</sup>	Product No.
HP Racks (cont.)	Monitor/Keyboard Switchboxes:	
	<ul> <li>4-port switchbox, plus 4 cable sets</li> </ul>	J1493A
	<ul> <li>8-port switchbox, plus 8 cable sets</li> </ul>	J1497A
	Rackmount Kits:	
	Keyboard rackmount kit	J1518A
	Monitor rackmount kit	J1519A
	Plain shelf rackmount kit	J1520A
	Filler panels (qty 6)	J1514A
	Delivery Services:	
	Inside delivery service	J1543A
	<ul> <li>Coordinated shipment service</li> </ul>	J1544A
	HP NetServer Rack Installation Self-Paced Training kit	D7001A
HP NetServer Racks <sup>2</sup>	For a complete list of racks and rack accessories, download the HP NetServer Rack Configuration tool from http://www.hp.com/go/enclosures	
Keyboard and Mouse	HP Mini-DIN mouse	C3751B
	HP NetServer keyboard	D4950B
	<sup>1</sup> Please see the <i>HP NetServers Configuration Guide</i> , P/N 5968-1542EUC, for important technical information when choosing your accessories, or see HP NetServer configuration	

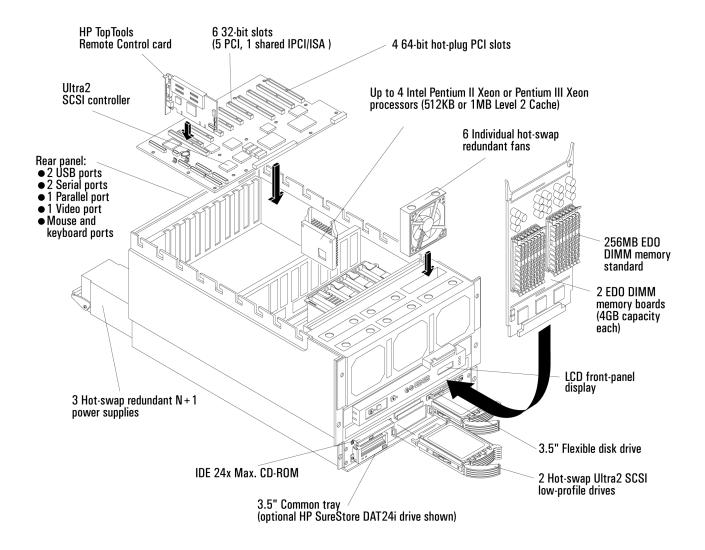
tools located at http://www.hp.com/go/netserver.

<sup>&</sup>lt;sup>2</sup> For additional rack accessories and kits, please see the *HP NetServer Rack Configuration Guide*, located at http://www.hp.com/go/enclosures. Use HP NetServer Rack Assistant to configure your complete rackmounted solution. Download from http://www.hp.com/go/enclosures .



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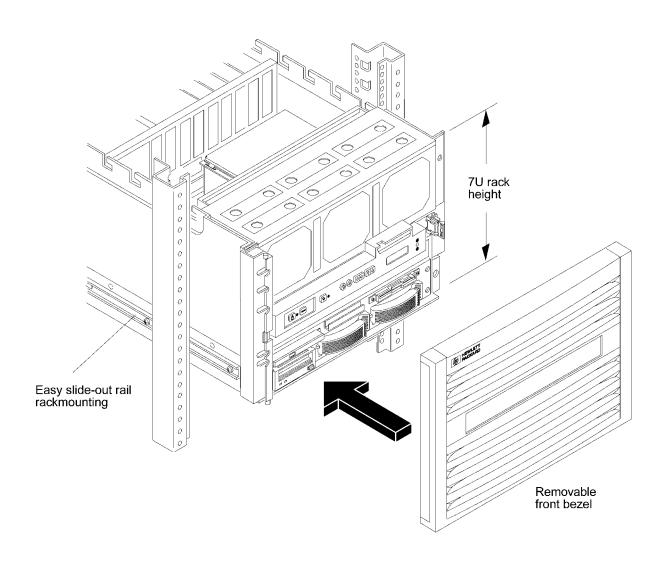
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Specifications	
Operating Temperature	41 degrees to 95 degrees F (5 degrees to 35 degrees C)
Operating Humidity	20% to 80% noncondensing
Acoustic Emissions	Sound pressure (LpA): <55 dB(A), bystander position
Power Supply	Three N+1 750W, 200/240V, hot-swap, redundant
Power Availability from Power System DC Source	1500 watts DC continuous
Maximum Power Draw from AC Source	1100 watts
System Dimensions	Rack: 17.5"W x 12.25"H x 28"D (445m W x 311m H x 711m D)
System Weight	135lb (61.24kg)

Choose Your HP NetServer LXr 8000				
Product No.	Processor	Memory	Configuration	All models include
D8256A	Intel Pentium III Xeon 500MHz/512KB cache	256MB ECC	Rack	One Intel Pentium III Xeon Processor, integrated ultra2 (LVDS) SCSI controller,
D8257A	Intel Pentium III Xeon 500MHz/1MB cache	256MB ECC	Rack	CD-ROM, flexible disk drive, 3 hot-swap power supplies, 6 hot-swap fans, hot- swap PCI, HP TopTools Remote Control
D8258A	Intel Pentium III Xeon 500MHz/2MB cache	256MB ECC	Rack	Card.
D8544A	Intel Pentium III Xeon 550MHz/512KB cache	256MB ECC	Rack	
D8546A	Intel Pentium III Xeon 550MHz/1MB cache	256MB ECC	Rack	
D8548A	Intel Pentium III Xeon 550MHz/2MB cache	256MB ECC	Rack	

Note: All Models Not Available in all Worldwide Regions

### **HP Select Express Program:**

HP NetServer Lxr 8000 is also available through the HP Select Express Program. This program offers custom integration of HP hardware offered at HP's lowest price. For more information visit our Web site at: http://www.hp.com/netserver/product/sep

For the latest information		
HP NetServer Web site	http://www.hp.com/go/netserver	
HP Fax Response system	1-800-333-1917 (U.S.)	
	1-208-344-4809 (available worldwide, fax only)	



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